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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/179,872	10/28/1998	PAN-JIN KIM	1317.1055/MD	6192

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STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

BROWN, RUEBEN M

ART UNIT PAPER NUMBER

2623

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/179,872

Applicant(s)

KIM ET AL.

Examiner

Reuben M. Brown

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14, 17, 18 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17, 18 and 20-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/26/2006 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to the claims have been considered but are not persuasive. Applicant argues on page 8 that Eyer does not teach the amended claimer feature of, 'and a major channel separately from the corresponding minor channel numbers'. Applicant continues to argue that, 'At table 2 of the reference, these same minor channel numbers are listed as channels 111-113. However, the corresponding major channel number is not listed. It is acknowledged that channel 10 is the ABC group, Primary Channel. However, this does not

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correspond to the claimed major channel, since the channels 111-1113 are not “received through” channel 10, as claimed’.

Examiner respectfully disagrees with this characterization of Eyer, since Eyer teaches “Note that when a primary channel (e.g. channel 10) is the current channel and the viewer provides a channel up command, the next channel which is displayed will be one of the secondary channels (e.g., channel 111) of the group to which the primary channel belongs”, col. 5, lines 20-41, emphasis added. Furthermore, Eyer in col. 10, lines 5-7, explains that “The secondary channels may be thought of as being “inside” the familiar channel 10, or somehow right next to the channel 10 in the broadcast signal”. Thus, Eyer clearly teaches that the secondary channels (e.g. channels 111-113) are received in the same group as their corresponding primary channel (e.g. channel 10).

Thus the display of channel 10 in Eyer, corresponds with the amended claimed, ‘and a number of the major channel separately from the corresponding minor channel numbers’.

In the first instance, even though applicant argues that the format disclosed by Eyer of “ABC-1, ABC-2 or 10.1, 10.2” does not read on ‘separate instance’, examiner respectfully disagrees. This is because in the literal sense, the number “10.1” is two separate digits, i.e., “10” and “1”. Thus, since the major channel number is separated from the minor channel number, by a decimal point or hyphen, it is asserted that it is correct to interpret two separate digits.

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In the second instance, applicant argues that in a discussion, Eyer only shows ABC-1, ABC-2, ABC-3 or 10.1, 10.2, 10.3, and thus only shows the minor numbers. However, examiner directs applicant to MPEP 2106, section 6:

a computer that differs from the prior art solely with respect to nonfunctional descriptive material that cannot alter how the machine functions (i.e., the descriptive material does not reconfigure the computer), or

- a process that differs from the prior art only with respect to nonfunctional descriptive material that cannot alter how the process steps are to be performed to achieve the utility of the invention.

Thus, if the prior art suggests storing a song on a disk, merely choosing a particular song to store on the disk would be presumed to be well within the level of ordinary skill in the art at the time the invention was made. The difference between the prior art and the claimed invention is simply a rearrangement of nonfunctional descriptive material.

Since Eyer teaches the display of each secondary channel, (ABC-1, ABC-2, ABC-3 or 10.1, 10.2, 10.3), whereas the user is clearly enabled to also access the associated primary channel, the display of this primary channel number represents non-functional descriptive material. Again, since Eyer clearly enables the user to select primary channels, and associated secondary channels, that are “inside” the primary channel, displaying the primary (i.e. major) channel number does not alter how the machine functions and thus represents a rearrangement of non-functional descriptive material.

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 8-11, 13, 17-18 & 20-22 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Eyer, (U.S. Pat # 5,982,411).

Considering claims 1 & 7, the amended claimed method for displaying channel information on a digital TV for receiving digital multichannel TV broadcasting, comprising changing a current channel to a demanded major channel outside of an EPG environment in response to a demand to change a major channel, is met by the disclosure of Eyer, which for instance, discloses a user changing a channel from CH-8, to CH-9, to CH-10, using the Channel-Up technique, col. 4, lines 22-28 & col. 5, lines 1-30.

As for the additionally claimed feature of automatically displaying on a TV screen, the minor channel numbers of programs received through the currently selected major channel and a number of the major channel number Eyer, discusses that the user steps through the channels

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111-113, which correspond to sub-channels of an ABC group of channels; see col. 5, lines 28-45 & col. 9, lines 14-65.

Regarding the specifics of displaying the channel numbers on the TV screen, Eyer also discloses actually displaying the list of sub-channels; see col. 9, lines 65-68 thru col. 10, lines 1-8.

In particular Eyer, in Table 2 shows that the channels numbers may be represented in the format of:

major channel # - minor channel #.

Table 2 of Eyer also shows that the virtual number, which is the number that the subscriber enters, are numerals between 1-999. Thus, for example, the major channel number is "10", whereas the associated minor channel numbers are 111-113. Thus the display of channel 10 reads on the amended claimed feature of, 'and a number of the major channel separately from the corresponding minor channel numbers', since Eyer discloses that the secondary channels may be thought of as being "inside" of the primary channel, col. 10, lines 1-7.

However, even if the display of channel 10 could be construed not to read on the claimed subject matter, 'received through', as argued by applicant, examiner points out that nonfunctional descriptive material that does not alter the function of the machine, does not

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represent patentably distinct subject matter. For instance, Eyer shows that secondary channels may be displayed as, ABC-1, ABC-2, ABC-3; or 10.1, 10.2, 10.3; or similarly, 10-A, 10-B, 10-C, col. 9, lines 55-65 thru col. 10, lines 1-15. Thus it would have been obvious for one of ordinary skill in the art at the time the invention was made, to operate Eyer in a manner to display the primary group channel separately, such as ABC or 10, at least for the desirable purpose of giving the user a visual display of all of the available channels.

Considering claims 2-3, Eyer teaches displaying the minor channel numbers in order of number, and after the currently selected major number, col. 10, lines 1-15.

Considering claims 8-9, the claimed subject matter also reads on Eyer, col. 10, lines 1-8.

Considering claim 10, the instant claim reads on displaying the TV program from the channel of the lowest minor channel number, after the instant channel is selected, which is necessarily included in Eyer.

Considering claims 11 & 13; see col. 9, lines 14-58.

Considering claims 17-18, the claimed apparatus and device for displaying channel information on a digital TV, comprising elements that correspond with subject matter mentioned above in the rejection of claim 1, are likewise treated.



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Considering claims 20 & 21, the claimed features of displaying non selected minor channel numbers or all of the minor channel numbers of the currently selected major channel numbers is also met by the disclosure of Eyer, col. 10, lines 1-15.

Considering claim 22, in Eyer only the major channel # of the selected channel is shown, not the major channel number of unselected channels, which reads on the claimed subject matter.

4. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eyer, in view of Etheredge, (U.S. Pat # 6,172,674).

Considering claims 4 & 6, Eyer does not teach hiding the major or minor channel numbers after a prescribed time has elapsed. Nevertheless, Etheredge provides a disclosure of removing a particular pop-menu that has been activated by the user, after a certain time, if a channel selection or menu item selection has not been made, (col. 13, lines 26-50; col. 14, lines 4-40; col. 15, lines 10-25). It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Eyer with the technology taught by Etheredge, at least for the known advantage of reducing the amount of extraneous information displayed to the viewer, since after a certain amount of time it may be assumed that the viewer is no longer interested in making a channel change from the menu displayed on the TV screen.

Considering claim 5, see Eyer col. 10, lines 1-10.

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5. Claims 12 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eyer, in view of Keenan, (U.S. Pat # 5,161,023).

Considering claim 12, the instant claimed feature reads on an endless loop operation such that once the user gets to the top of a list of programs, the next program to be highlighted (selected), would be the program at the bottom of the list, and vice versa. Keenan (col. 1, lines 51-59) discloses such a technology. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Eyer, with the known technology of 'wrap around' lists as taught by Keenan (Fig. 3A; col. 3, lines 40-52), at least for the desirable purpose of avoiding the user having to move the cursor in the other direction in order to reach the opposite extreme of the instant list, which would be burdensome on the user, at least in the case of long lists of programs.

Considering claim 14, as discussed above in the analysis of claim 12, it would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Eyer with the well known 'wrap around' technology disclosed in Keenan (Fig. 3A). However, claim 14 requires the additional step that a user is automatically connected to a succeeding or preceding list of minor channels, depending on whether the user's cursor is currently selecting the highest minor channel or lowest minor channel, respectively of the currently active minor channel list. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify the combination of Eyer & Keenan to move to a next list of channels, at least for the desirable advantage of avoiding the user having to manually select the next list of channels.

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**Any response to this action should be mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**or faxed to:**

(571) 273-8300, (for formal communications intended for entry)

**Or:**

(571) 273-7290 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reuben M. Brown whose telephone number is (571) 272-7290. The examiner can normally be reached on M-F (9:00-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Reuben M. Brown

  
REUBEN M. BROWN  
PATENT EXAMINER